

What is claimed is:

1. A microalloyed steel easy to separate by fracture splitting at low temperatures, which comprises from 0.15 to 0.35 wt% carbon, from 0.5 to 2.0 wt% silicon, from 0.5 to 1.5 wt% manganese, from 0.03 to 0.15 wt% phosphorus, from 0.01 to 0.15 wt% sulfur, from 0.01 to 0.5 wt% copper, from 0.01 to 0.5 wt% nickel, from 0.01 to 1.0 wt% chromium, from 0.001 to 0.01 wt% soluble aluminium, from 0.005 to 0.035 wt% nitrogen, from 0.0001 to 0.01 wt% calcium, and from 0.001 to 0.01 wt% oxygen, the remainder comprising iron and inevitable impurities, and which satisfies the following relationships 1 and 2:

Relationship 1

$$0.6 \leq C_{eq} \leq 0.85$$

wherein $C_{eq} = C + 0.07 \times Si + 0.16 \times Mn + 0.61 \times P + 0.19 \times Cu + 0.17 \times Ni + 0.2 \times Cr$

Relationship 2

$$0 \leq T_{fr} \leq 1.5$$

wherein $T_{fr} = (C + 0.8 \times Si + 5 \times P) - 0.5 \times (Mn + Cr + Cu + Ni)$.

2. The microalloyed steel easy to separate by fracture splitting at low temperatures according to claim 1, which contains one or both of up to 0.02 wt% titanium and up to 0.02 wt% zirconium in place of part of the iron as the remainder.

3. The microalloyed steel easy to separate by fracture splitting at low temperatures according to claim 1 or 2, which contains one or both of up to 0.3 wt% lead and up to 0.3 wt% bismuth in place of part of the iron as the remainder.

4. A fitting member produced through separation by fracture splitting at a low temperature, which comprises from 0.15 to 0.35 wt% carbon, from 0.5 to 2.0 wt% silicon, from 0.5 to 1.5 wt% manganese, from 0.03 to 0.15 wt% phosphorus, from 0.01 to 0.15 wt% sulfur, from 0.01 to 0.5 wt% copper, from 0.01 to 0.5 wt% nickel, from 0.01 to 1.0 wt% chromium, from 0.001 to 0.01 wt% soluble aluminum, from 0.005 to 0.035 wt% nitrogen, from 0.0001 to 0.01 wt% calcium, and from 0.001 to 0.01 wt% oxygen, the remainder comprising iron and inevitable impurities, and which satisfies the following relationships 1 and 2:

Relationship 1

$$0.6 \leq C_{eq} \leq 0.85$$

wherein $C_{eq} = C + 0.07 \times Si + 0.16 \times Mn + 0.61 \times P + 0.19 \times Cu + 0.17 \times Ni + 0.2 \times Cr$

Relationship 2

$$0 \leq T_{fr} \leq 1.5$$

wherein $T_{fr} = (C + 0.8 \times Si + 5 \times P) - 0.5 \times (Mn + Cr + Cu + Ni)$.

5. The fitting member produced through separation by fracture splitting at a low temperature according to claim 4, which contains one or both of up to 0.02 wt% titanium and up to 0.02

wt% zirconium in place of part of the iron as the remainder.

6. The fitting member produced through separation by fracture splitting at a low temperature according to claim 4 or 5, which contains one or both of up to 0.3 wt% lead and up to 0.3 wt% bismuth in place of part of the iron as the remainder.

7. The fitting member produced through separation by fracture splitting at a low temperature according to any one of claims 4 to 6, which is a connecting rod for an engine.